digital
Software Product Description

PRODUCT NAME: RSTS/E, Version 6C, Resource Sharing Timesharing System/Extended **SPD 13.1.11**

DESCRIPTION:

The RSTS/E operating system allows multiple users to interact with the system and its data structures. RSTS/E supports up to 63 users simultaneously processing data using BASIC-PLUS; or using the optionally available COBOL, FORTRAN IV, RPG II, APL, and BASIC-PLUS-2 language facilities. RSTS/E also supports line printer spooling and execution of up to 8 batch streams.

The RSTS/E data file system provides a range of on-line processing capabilities. Files can be created, updated, extended, and deleted interactively from the user's terminal or under program control. Files can be protected from access on an individual, group, or universal basis. Files can be accessed by many terminal users simultaneously and updated on-line. Data can be stored on removable disk cartridges, disk packs, or magnetic tape. Industry-compatible magnetic tape files prepared on another computer can be read on RSTS/E, and tape files generated on RSTS/E are readable by other computer equipment.

The RMS-11 record management services included with RSTS/E support the relative and sequential organizations of COBOL and BASIC-PLUS-2. In addition, RSTS/E also supports single and multi-key indexed file organization with the optionally available RMS-11K package.

RSTS/E dynamically allocates processor time, memory space, file space, and peripherals on a best-fit/best-throughput basis. Since RSTS/E is a resource sharing system, every terminal user has access to all the system peripherals and resources. Line printers, card readers, disks, and tapes are all available to any terminal user on-line. RSTS/E can provide output from these devices in a format meaningful for the recipient. One system resource, the terminals, can also be accessed by a user program for input and output. A single program can control any number of terminals up to a total of 63.

The system manager and privileged users have on-line access to system management commands and operations. Additionally, system commands and library programs, including the DEC EDITOR, are also available to all users.

RSTS/E provides the ability for total or selective backup of programs and files. Backup can be done on-line. In the event of a malfunction such as a system crash or power brown-out, the basic system will automatically recover while programs and data files are maintained intact.

MINIMUM HARDWARE REQUIRED:

- PDP-11/34, PDP-11/35 (with KE11-E), PDP-11/40 (with KE11-E), PDP-11/45, PDP-11/50, PDP-11/55, PDP-11/60 (no WCS support), or PDP-11/70
- Parity or ECC memory with KT11 memory management, as follows:
  1. at least 96K bytes (48K words) for BASIC-PLUS only support and use of small utilities (16K bytes or less)
  2. at least 128K bytes (64K words) for RMS-11 record management services support and use of all utilities
- KW11-L or KW11-P clock
- ROM bootstrap for disk/tape
- Console terminal: LA30, LA36, VT05, VT50, VT52, LT33 or LT35
- One of the following disk systems:
  1. RK11 disk cartridge controller (includes one RK05 drive) with an additional RK05-F drive or two additional RK05-J drives. Only one additional RK05-J is required on a 96K byte minimum configuration.
  2. RL11 disk cartridge controller (includes one RL01 drive) with an additional RL01 drive.
  3. RK611 disk cartridge controller (includes one RK06 drive) and an additional RK06 drive.
  4. RK711 disk cartridge controller (includes one RK07 drive).
  5. RPR11 Disk pack controller (includes one RPR02 drive).
  6. RP11 Disk pack controller (includes one RP03 drive).
  7. RJM02 (or RWM02 for 11/70 only) disk pack controller (includes one RM02 drive).
  8. RWM03 (11/70 only) disk pack controller (includes one RM03 drive).
  9. RJP04 (or RWP04 for 11/70 only) disk pack controller (includes one RP04 drive).
  10. RJP05 (or RWP05 for 11/70 only) disk pack controller (includes one RP05 drive).
  11. RJP06 (or RWP06 for 11/70 only) disk pack controller (includes one RP06 drive).

- One of the following magnetic tape systems (not required for triple RK05, dual RL01, dual RK06, or dual RK07 disk systems):
  1. TJE16 (or TWE16 for 11/70) magnetic tape controller (includes one TE16 transport)
  2. TM11/TMB11 magnetic tape controller (includes one 7- or 9-track TE10 transport or TS03 transport)
  3. TJU45 (or TWU45 for 11/70) magnetic tape controller (includes one TU45 transport)

OPTIONAL HARDWARE:

- Additional parity or ECC memory (core or solid state) to a system total of 248K bytes (124K words), or additional parity or ECC memory to a system total of 3840K bytes (1920K words) for 11/70
- FP11 Floating Point Processor or KE11-F Floating Instruction Set
- KK11-A Cache memory option (1134A only)
- Up to 8 RK05 logical units, where an RK05-J drive is one logical unit and an RK05-F is two logical units
- Up to 8 RL01 disk drives
- Up to 8 RK06 disk drives
- Up to 8 RK07 disk drives
- Up to 8 RM02 disk drives
- Up to 8 RM03 disk drives (11/70 only)
- Up to 8 RPR02, RP03, RP04, RP05, or RP06 drives
- Up to 8 RS03/RS04 drives or up to 8 RS11 drives
- Up to 4 RX11 dual or single floppy disk systems for a maximum of 8 RX01 drives
- Up to 8 TS03, TE10, TE16, or TU45 transports
- Up to 4 TU56 dual DECtape transports
- Up to 8 LP11, LS11, LV11 (in ASCII mode only), LP05, or LA11 line printers
- CM11, CR11 or CD11 card reader
- PC11 paper tape reader/punch or PR11 paper tape reader
- Up to 127 terminal line interfaces, of which up to 16 can be single-line (KL11, DL11, LC11, DC11, or DJ11), and the remainder multi-line interfaces (DH11s or DZ11s with or without DM11s)
- Up to 127 terminals: LA30, LA36, LA180, VT05, VT50, VT52, VT55, LT33, LT35, RT02, or IBM 2741-compatible terminals
- The LA180 print-only terminals are supported subject to the following constraints:
  1. The LA180 must be connected to the RSTS/E system by a full-duplex line. Half-duplex operation is not supported.
  2. No provision is made by the hardware or software to ensure data integrity on the serial line.
  3. There is one synchronization lockup condition specific to the LA180 that RSTS/E software does not automatically clear. Manual operator action is required.

PREREQUISITE SOFTWARE:

None

OPTIONAL SOFTWARE:

- PDP-11 COBOL, Version 3 or later
- PDP-11 BASIC-PLUS-2
- FORTRAN-IV RSTS/E, Version 2 or later
- APL-11
- RPG II for RMS-11K, Version 8 or later
- DMS-500
- SORT-11, Version 2 or later
- RMS-11K
- DATATRIEVE-11
- RSTS/E-2780
- DECnet/E

TRAINING CREDITS:

THREE (3) — Applies only to options that include support services. Consult the latest Educational Services Catalog at your local office for the available courses, course requirements, and guidelines.

SUPPORT CATEGORY:

A — Software Support will be provided as stated in the Software Support Categories Addendum to this SPD.

UPDATE POLICY:

Software Updates, if any, released by DIGITAL during the one (1) year period following installation, will be provided to the customer for a media charge (includes no installation). After the first year, updates, if any, will be made available according to then prevailing DIGITAL policies.

ORDERING INFORMATION:

All binary licensed software, including any subsequent updates, is furnished under the licensing provisions of DIGITAL's Standard Terms and Conditions of Sale, which provide in part that the software and any part thereof may be used on only the single CPU on which the software is first installed, and may be copied, in whole or in part (with the proper inclusion of the DIGITAL copyright notice and any DIGITAL proprietary notices on the software) only for use on such CPU. All source licensed software is furnished only under the terms and conditions of a separate Software Program Sources Agreement between Purchaser and DIGITAL.

Standard options with no support services are only available after the purchase of one supported license. When a software license is ordered without support services, the category of support applicable to such software is Category C.

A single-use license only option is a license to copy the software previously obtained under license. and use such software in accordance with DIGITAL's Standard Terms and Conditions of Sale. The category of support applicable to such copied software is Category C.

Source and/or listing options are only available after the purchase of at least one supported license and after a source license agreement is in effect.

The following key (D, E, F, Q, R, T, V, Z) represents the distribution media for the product and must be specified at the end of the order number, e.g., QR430-AD = binaries on 9-track magnetic tape.

D = 9-track Magnetic Tape
E = RK05 Disk Cartridge
F = 7-track Magnetic Tape
Q = RL01 Disk Cartridge
R = Microfiche
T = RK06 Disk Cartridge
V = RK07 Disk Cartridge
Z = No hardware dependency

Standard Options

QR430 -A— Single-use license, binaries, documentation, support services (media: D, E, F, Q, T, V)

QR430 -C— Single-use license, binaries, documentation, no support services (media: D, E, F, Q, T, V)

QR430 -D— Single-use license only, no binaries, no documentation, no support services (media: Z)

Source/Listing Options

QR430 -F— Listings (media: R)

QR432 -F— Monitor and SYSGEN Listings (media: R)

QR433 -F— BASIC-PLUS, all run-time systems listings (media: R)

Upgrade Options

The following option is available as an upgrade kit from RSTS-11 for use on the same single CPU on which RSTS-11 is licensed. The license previously granted for RSTS-11 shall be extended to cover this upgrade.

QR400 -A— Single-use license, binaries, documentation, support services (media: D, E, F)

Update Options

Users of RSTS/E whose specified Support Category warranty has expired may order under license the following software update at the then current charge for such update. The update is distributed in binary form on the appropriate medium and includes no installation or other services unless specifically stated otherwise.

QR430 -H— Binaries, documentation (media: D, E, F, Q, T, V)

Users of RSTS/E whose specified Support Category warranty has not expired may order under license the following software update for the then current media charge. The update is distributed in binary form on the appropriate medium and includes no installation or other services unless specifically stated otherwise.

QR430 -W— Binaries, documentation (media: D, E, F, T)

Miscellaneous Options

QR430 -G— BASIC-PLUS and User's manuals (media: Z)

ADDITIONAL SERVICES:

QR430 -3— Standard Binary Program Update Service (media: D, E, F, Q, T, V)

The following options are available to Binary Program Update Service and in-warranty customers only:

QR430 -1— Additional Dispatch Subscription (media: Z)

QR436 -3— RSTS/E Autopatch option (media: D, E, F, Q, T, V)

ADDENDUM
SOFTWARE SUPPORT CATEGORIES

Each software product (hereinafter 'SOFTWARE') with a designated Support Category A or B in the applicable Software Product Description (SPD) existing at the time of order will be the current release at the time of delivery and will conform to the SPD. DIGITAL's sole obligation shall be to correct defects (nonconformance of the SOFTWARE to the SPD) as described below. Any SOFTWARE with a designated Support Category C will be furnished on an 'as is' basis.

For SOFTWARE with a designated Support Category A or B, DIGITAL will provide the services set forth below without additional charge.

CATEGORY A

1. Upon notification by customer to the nearest DIGITAL office that the computer system, including all required prerequisite hardware and software, is ready for the installation of the SOFTWARE, DIGITAL will install such SOFTWARE in any location within the contiguous forty-eight (48) United States, the District of Columbia, or a country in which DIGITAL or a subsidiary of DIGITAL has a software service facility. The notification must be received by DIGITAL and the system must be ready for installation within thirty (30) days after the delivery of the SOFTWARE to customer or DIGITAL will have no obligation to install. Installation will consist of: (1) verification that all components of the SOFTWARE have been received by customer, (2) loading the SOFTWARE, and (3) executing a DIGITAL sample procedure.
2. During the ninety (90) day period after installation, if the customer encounters a problem with the current unaltered release of the SOFTWARE which DIGITAL determines to be a defect in the SOFTWARE, DIGITAL will provide the following remedial service (on site where necessary): (1) if the SOFTWARE is inoperable, apply a temporary correction (TC) or make a reasonable attempt to develop an emergency by-pass, and (2) assist the customer to prepare a Software Performance Report (SPR) and submit it to DIGITAL.
3. During the one (1) year period following installation, if the customer encounters a problem with the SOFTWARE which his diagnosis indicates is caused by a SOFTWARE defect, the customer may submit an SPR to DIGITAL. DIGITAL will respond to problems reported in SPRs which are caused by defects in the current unaltered release of the SOFTWARE via the Maintenance Periodical for the SOFTWARE, which reports SPRs received, code corrections, temporary corrections, generally useful emergency by-passes and/or notice of the availability of corrected code. Software Updates, if any, released by DIGITAL during the one (1) year period, will be provided to the customer on DIGITAL's standard distribution media as specified in the applicable SPD. The customer will be charged only for the media on which such updates are provided, unless otherwise stated in the applicable SPD, at DIGITAL's then current media prices.

CATEGORY B

During the one (1) year period following delivery, the services provided to the customer will be the same as set forth in 3 above.

CATEGORY C

SOFTWARE is provided on an 'as is' basis. Any software services, if available, will be provided at the then current charges.

DIGITAL shall have the right to make additional charges for any additional effort required to provide services resulting from customer use of other than current unaltered release of the SOFTWARE operated in accordance with the SPD.